

Fig.1

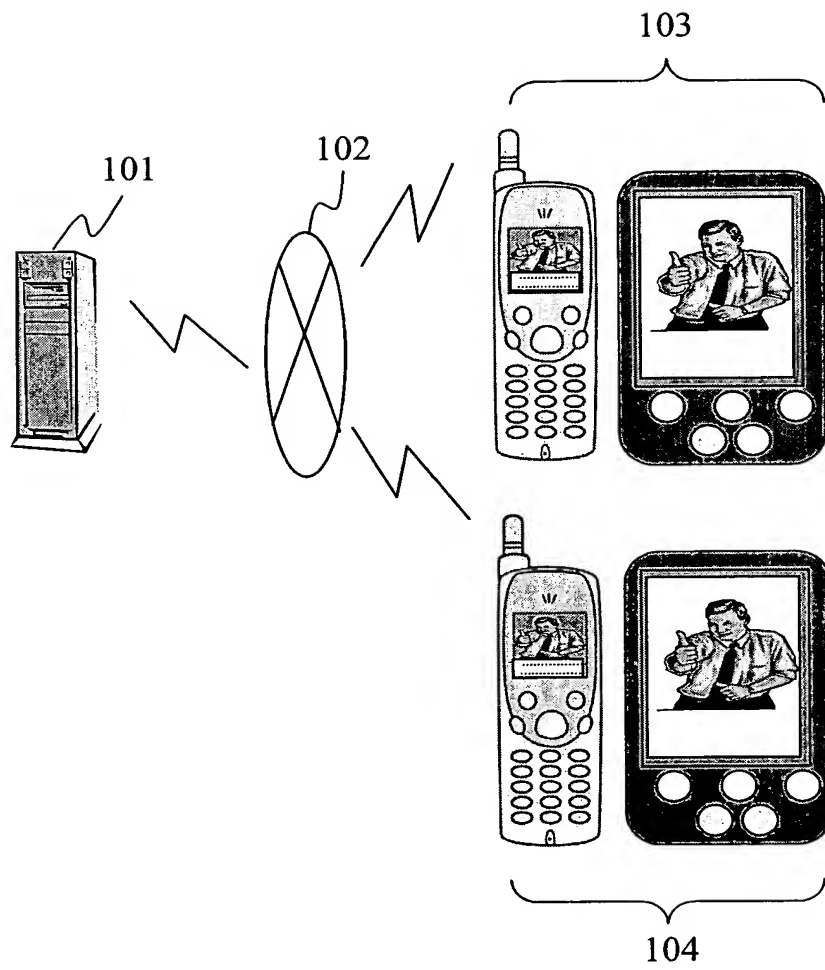


Fig.2

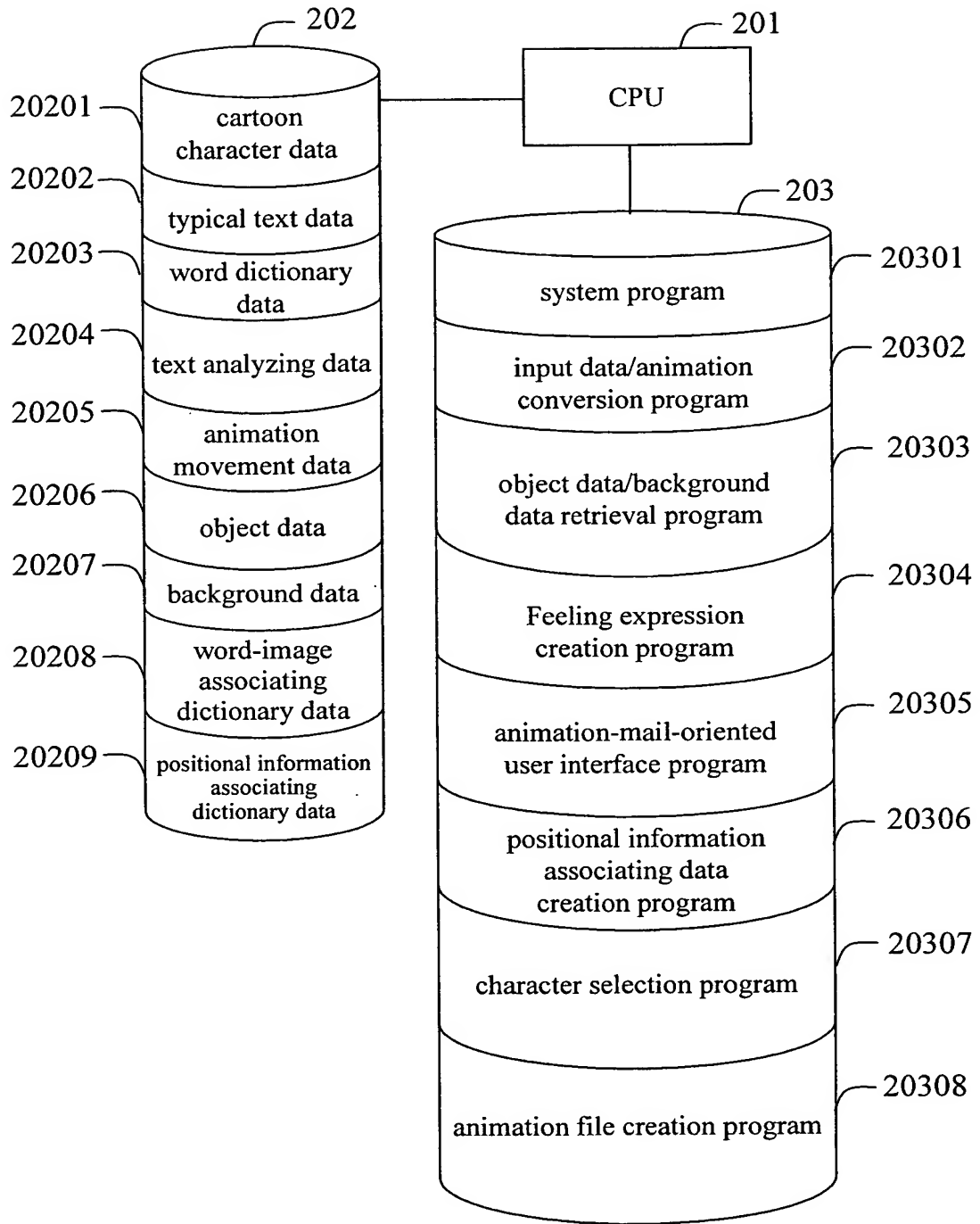


Fig.3

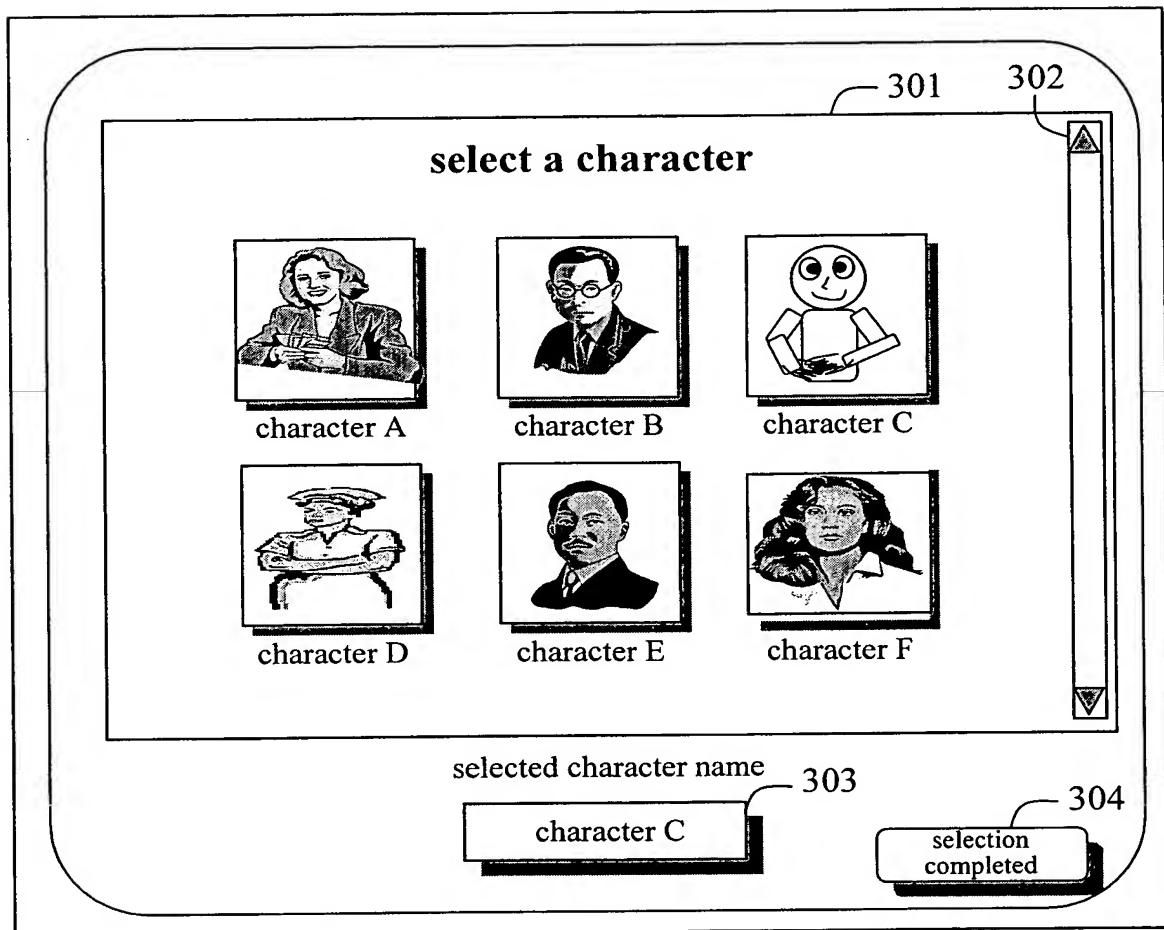


Fig.4

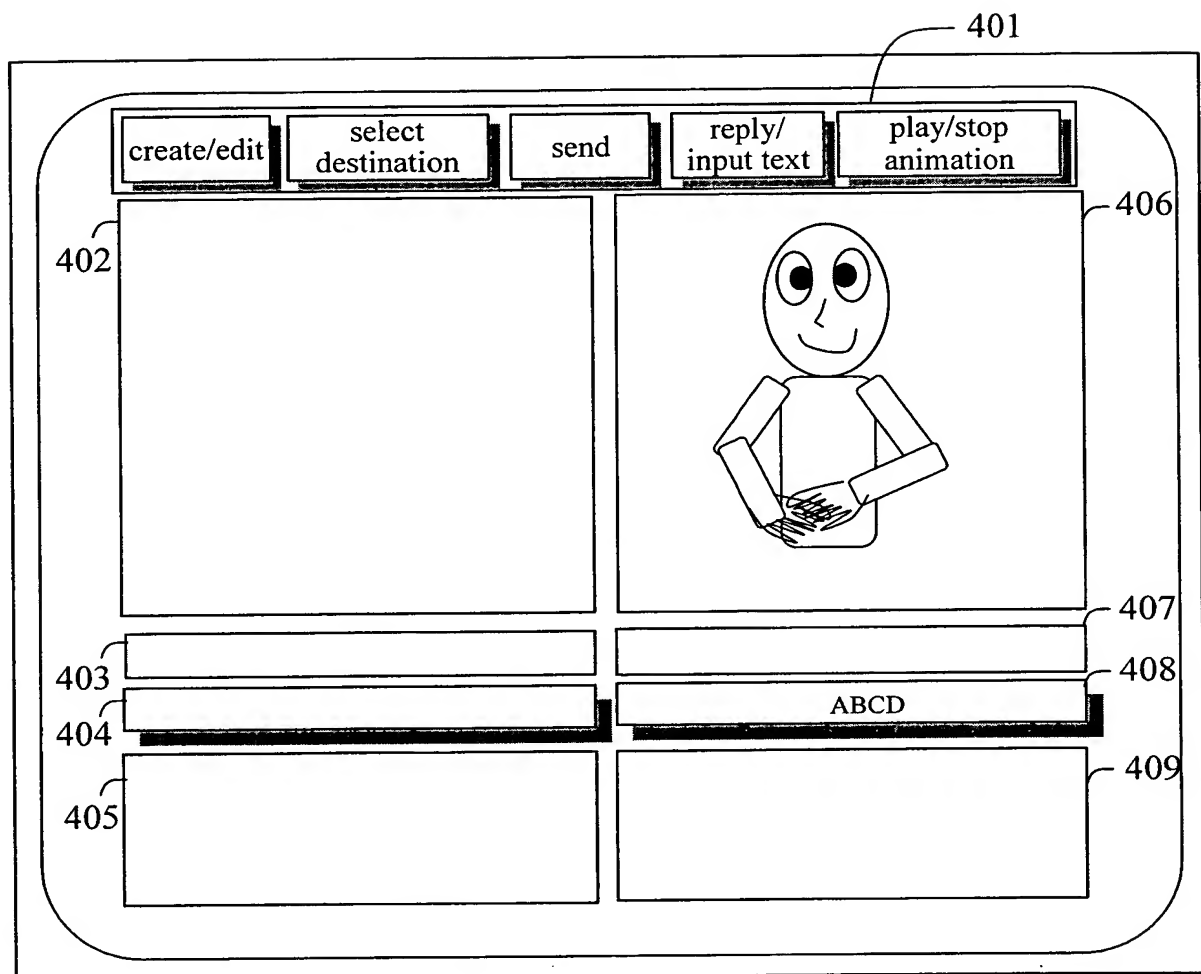


Fig.5

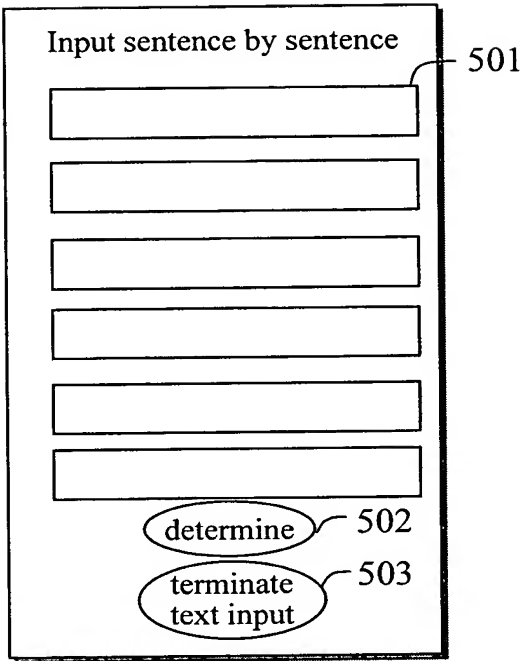


Fig.6

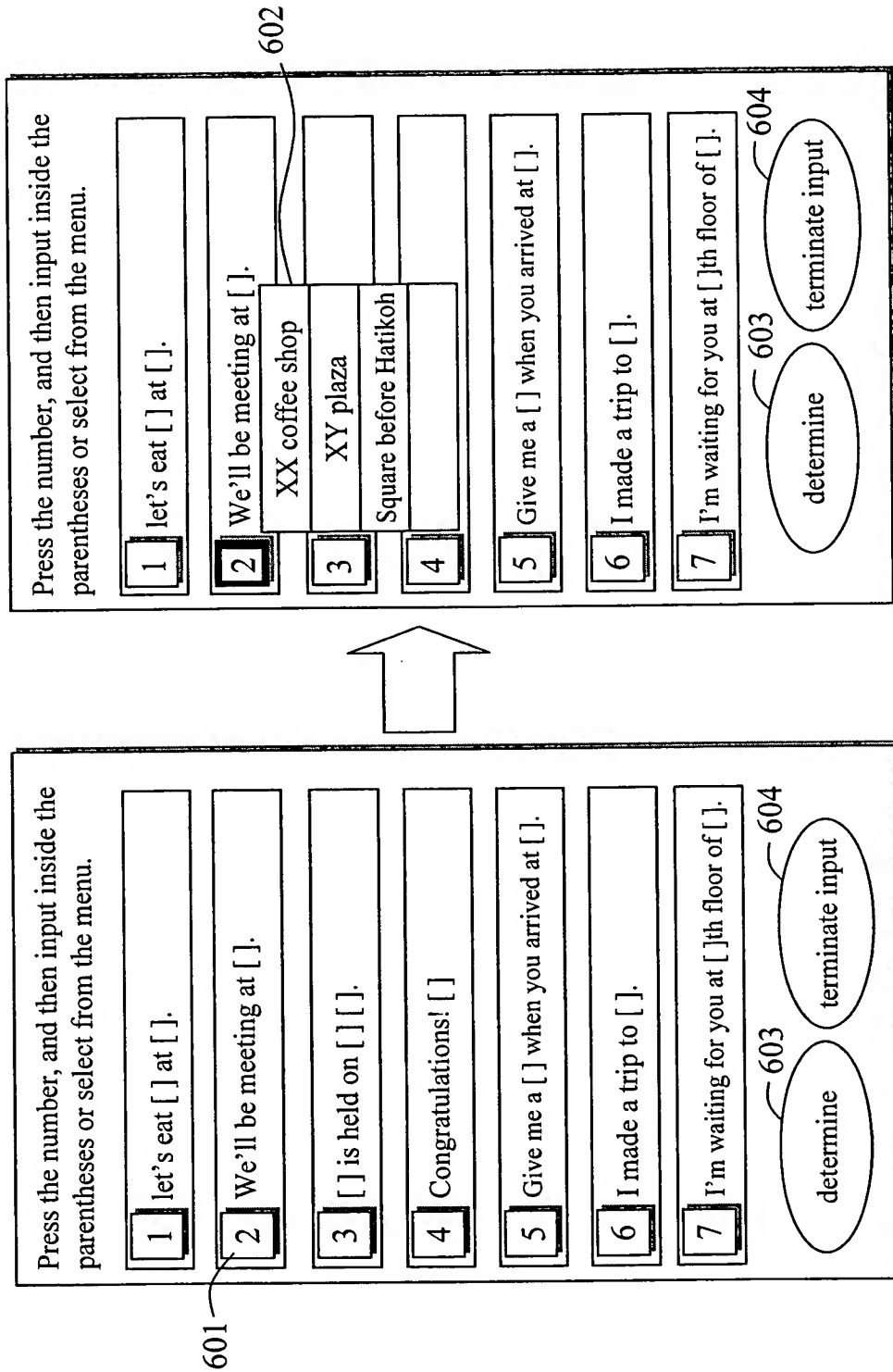


Fig.7

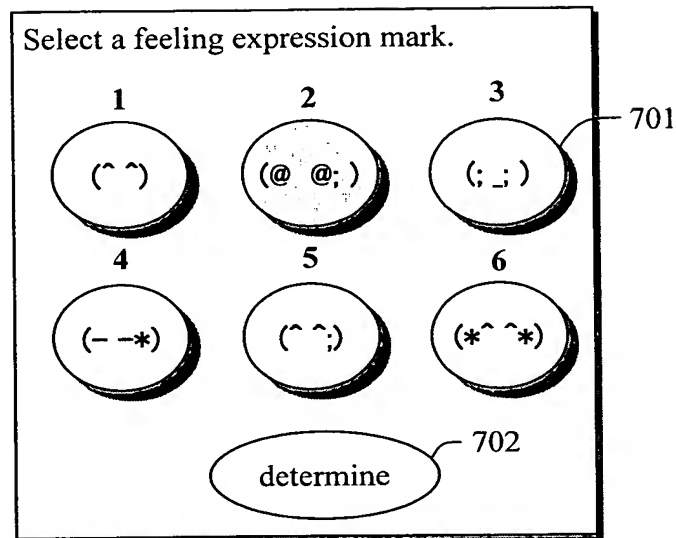


Fig.8

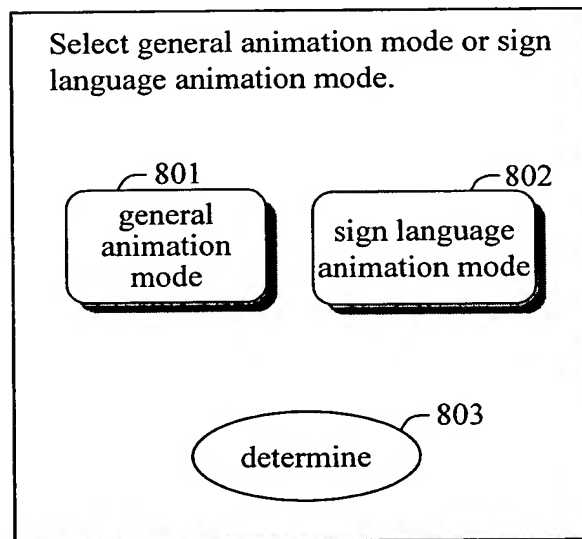


Fig.9

<div>902</div> <div>901</div> <div>word number</div> <div>category name</div>	1	2	3	4	
Place (fixed)	Shinjuku	Shibuya	XX coffee shop	XY department store
Name of cuisine	French	Japanese	Italian	Indian
Event	Admission into a school	Graduation	Thank-you party	Contact
Communication means	Telephone	Mail	Letter	Postcard
Object	Book	Bag	Cup	Calculator
Numeric_month	1-12				
Numeric_day	1-31				
Numeric_floor number	1-80				
Material of cooking	Pike conger	Tempura	Carry	Laumen
Place (real-time)	Here	This way		
Movements	Eat	Run	Think	Write
⋮	⋮	⋮	⋮	⋮	

Fig.10

Word		Associated data			
		Character movement		Object	Background
		General mode	Sign language mode		
1001 Work	1002 Construction	Mov_work_kouji	Hand_work_kouji		
	Field	Mov_work_agri	Hand_work_agri		
	Desk	Mov_work_desk	Hand_work_desk		
Tired		Mov_tired	Hand_tired		
Brow up		Mov_browup	Hand_browup		
Time				Clock_1	
XX coffee shop				Cup_1	Back_XX coffee shop
Meet [] by appointment		Mov_appointment			
Bus			Bus_1		
Paris					Back_Paris
Shinjuku					Back_Shinjuku
Laumen				Laumen	
Eat	Rice	Eat_Rice	Hand_Eat_Rice		
	Laumen	Eat_Laumen	Hand_Eat_Laumen		
	French	Eat_French	Hand_Eat_French		

Fig.11

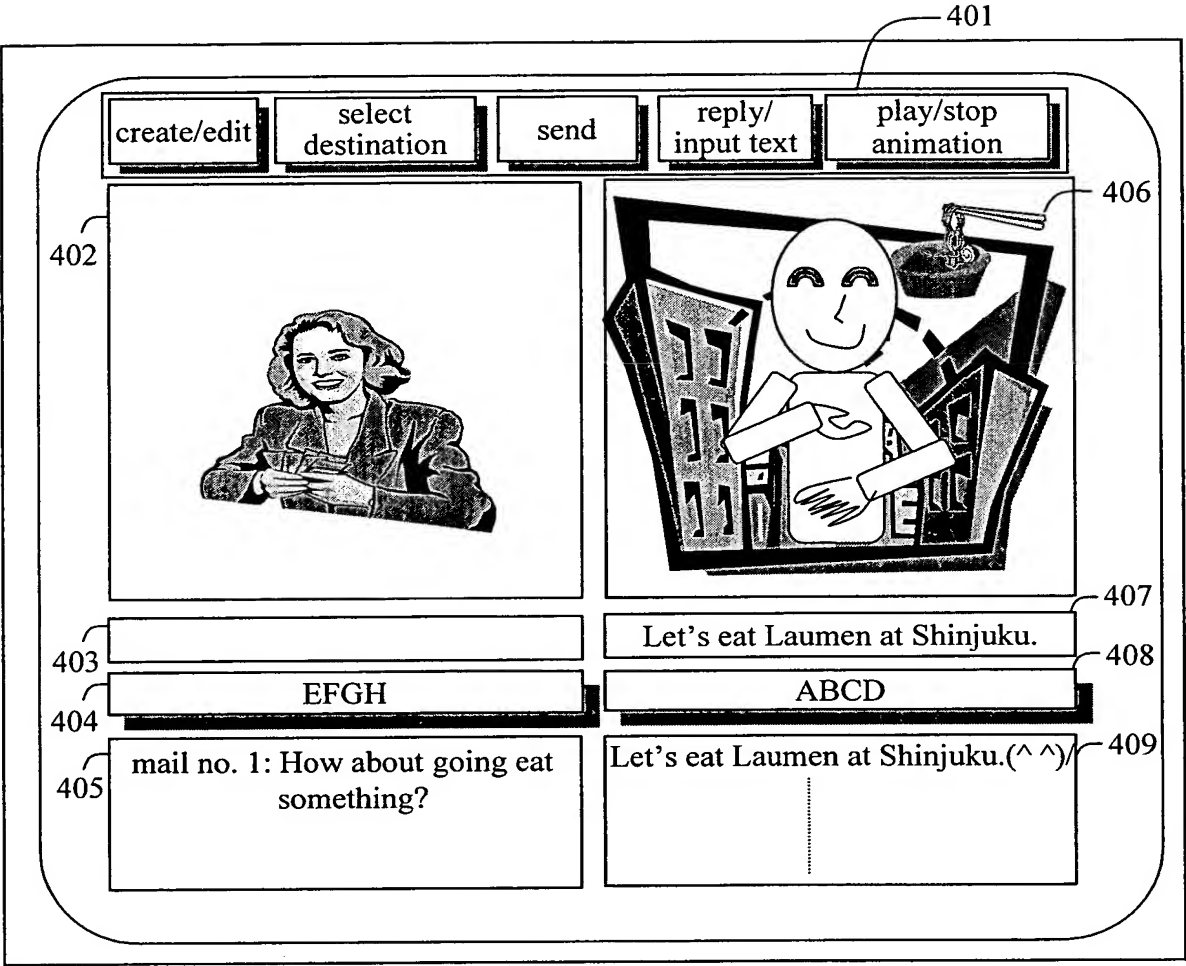


Fig.12

Positional information		Object information	Background information
Longitude	Latitude		
$A0^{\circ} m0'$	$B0^{\circ} n0'$	Shape_Cofeecup	Back_a XX coffee shop
$A0^{\circ} m1'$	$B0^{\circ} n1'$	Shape_a XX university	Back_Hachiouji
$A0^{\circ} m2'$	$B0^{\circ} n2'$		Back_a XX park
$A0^{\circ} m3'$	$B0^{\circ} n3'$	ROGO_XX shop	Back_Aoyama
$A0^{\circ} m4'$	$B0^{\circ} n4'$	Shape_XY building	Back_Shinjuku
$A0^{\circ} m5'$	$B0^{\circ} n5'$	Shape_XX building	Back_Asakusa
⋮	⋮	⋮	⋮
$Ai^{\circ} j'$	$Bi^{\circ} nj'$	Shape_effel	Back_Paris

Fig.13

number	typical text group	number of variable parts	movement pattern of typical part	variable part [i] (i = slot number) category			slot word menu		
				variable part [1]	variable part [2]	variable part [3]	variable part [1]	variable part [2]	variable part [3]
1	let's eat [] at [].	2	m_1_1 m_1_2	place	Name of cuisine/name of cooking material		Shinjuku Aoyama Ginza XY department store ⋮	Italian Chinese pot of canard viande and vegetable stews oyster ⋮	
2	We'll be meeting at [].	1	m_2_1	place			Square before Hatikoh XX coffee shop XY plaza ⋮		
3	[] is held on [] [].	3	m_3_1	Numeric_ month	Numeric_ day	Event	1-12	1-31	Party off-line meeting ⋮
4	Congratulations! []	1	m_4_1	Event			Birthday Admission to a school ⋮		
5	Give me a [] when you arrived at [].	2	m_5_1	place	Event/communication means		Station Home ⋮ Hakata Sado ⋮	message mail ⋮	
6	I made a trip to [].	1	m_5_1	place					
7	I'm waiting for you at []th floor of [].	1	m_5_1 m_5_2	place	Numeric_floor number		Here XY department store ⋮	1-100	
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

Fig.14

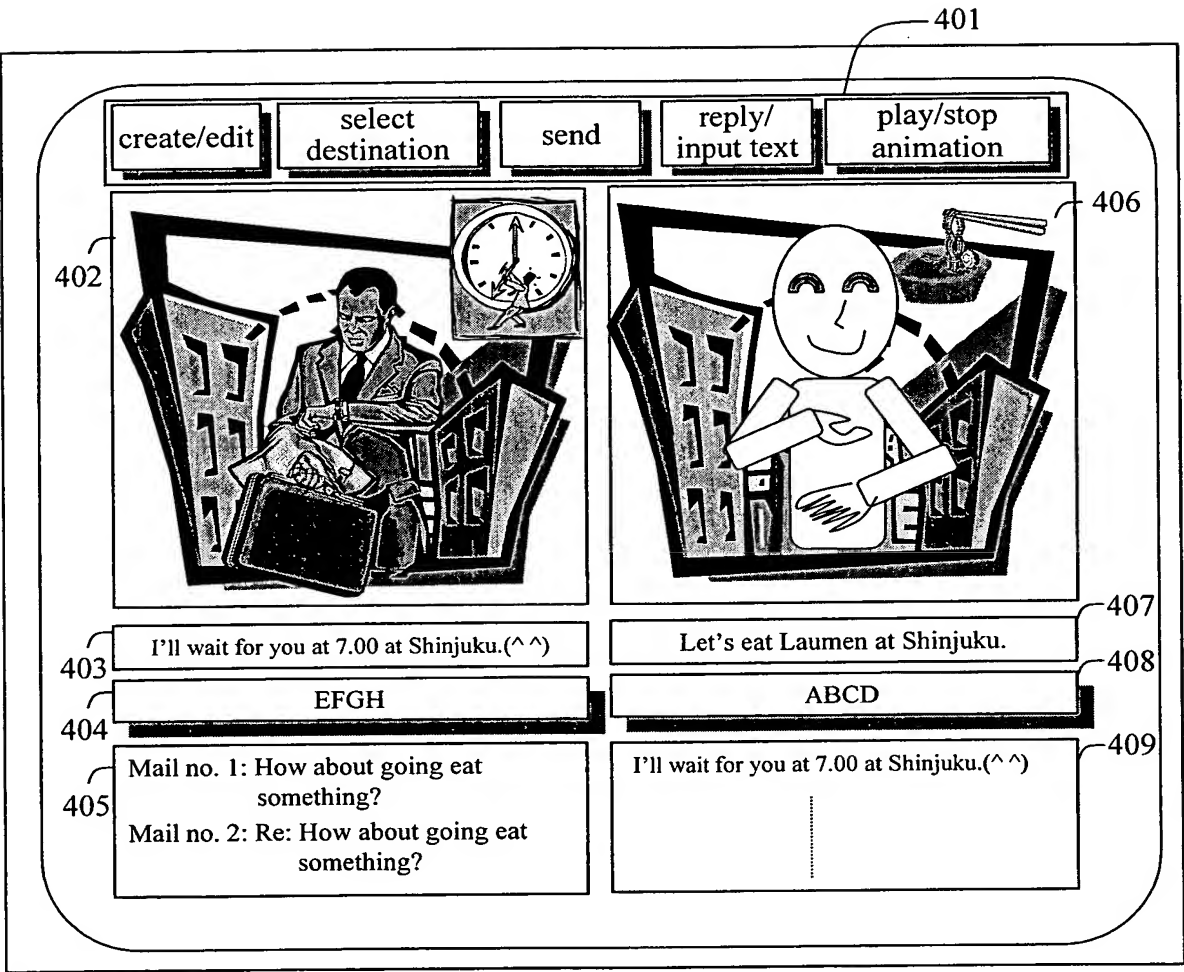


Fig.15A

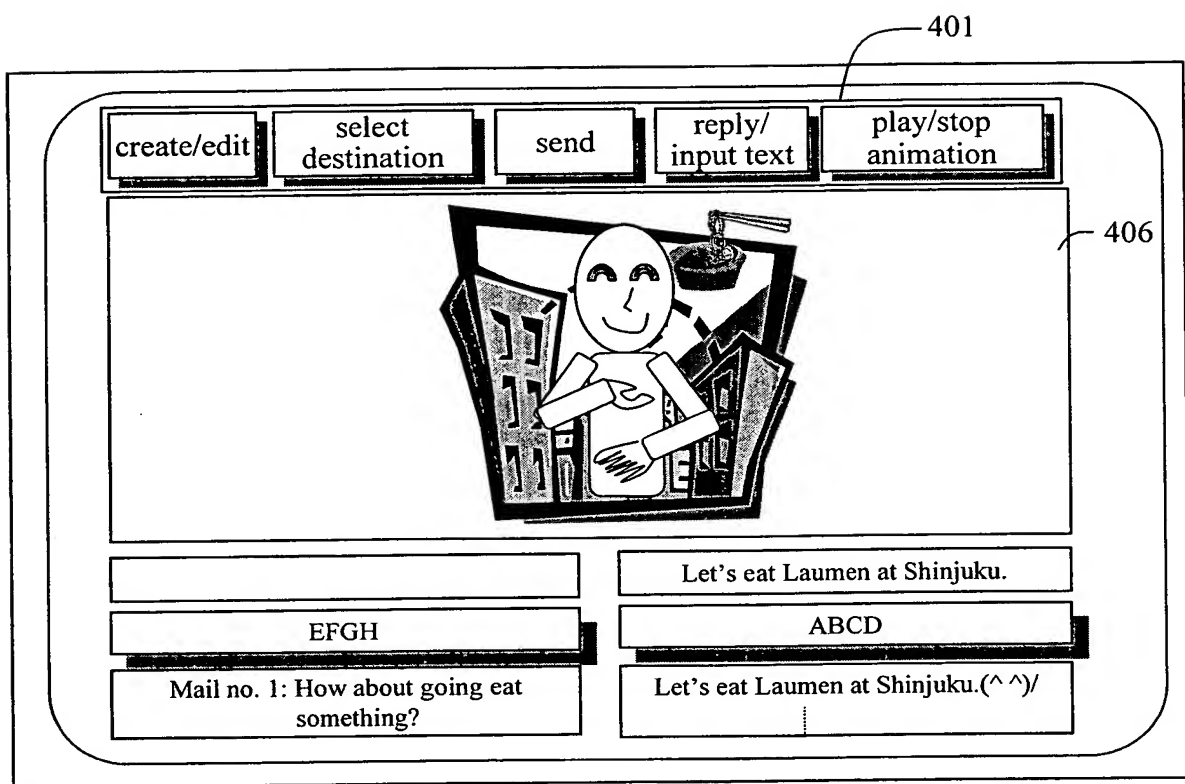


Fig.15B

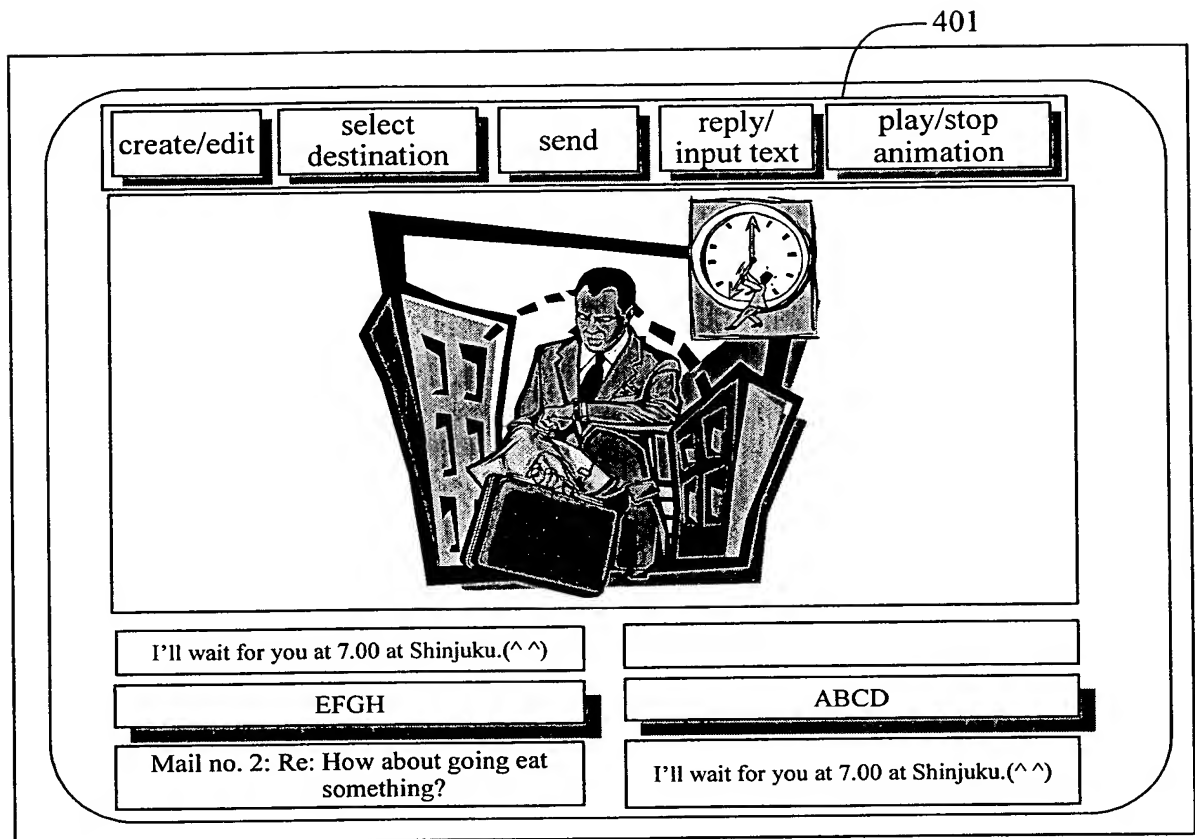


Fig.16

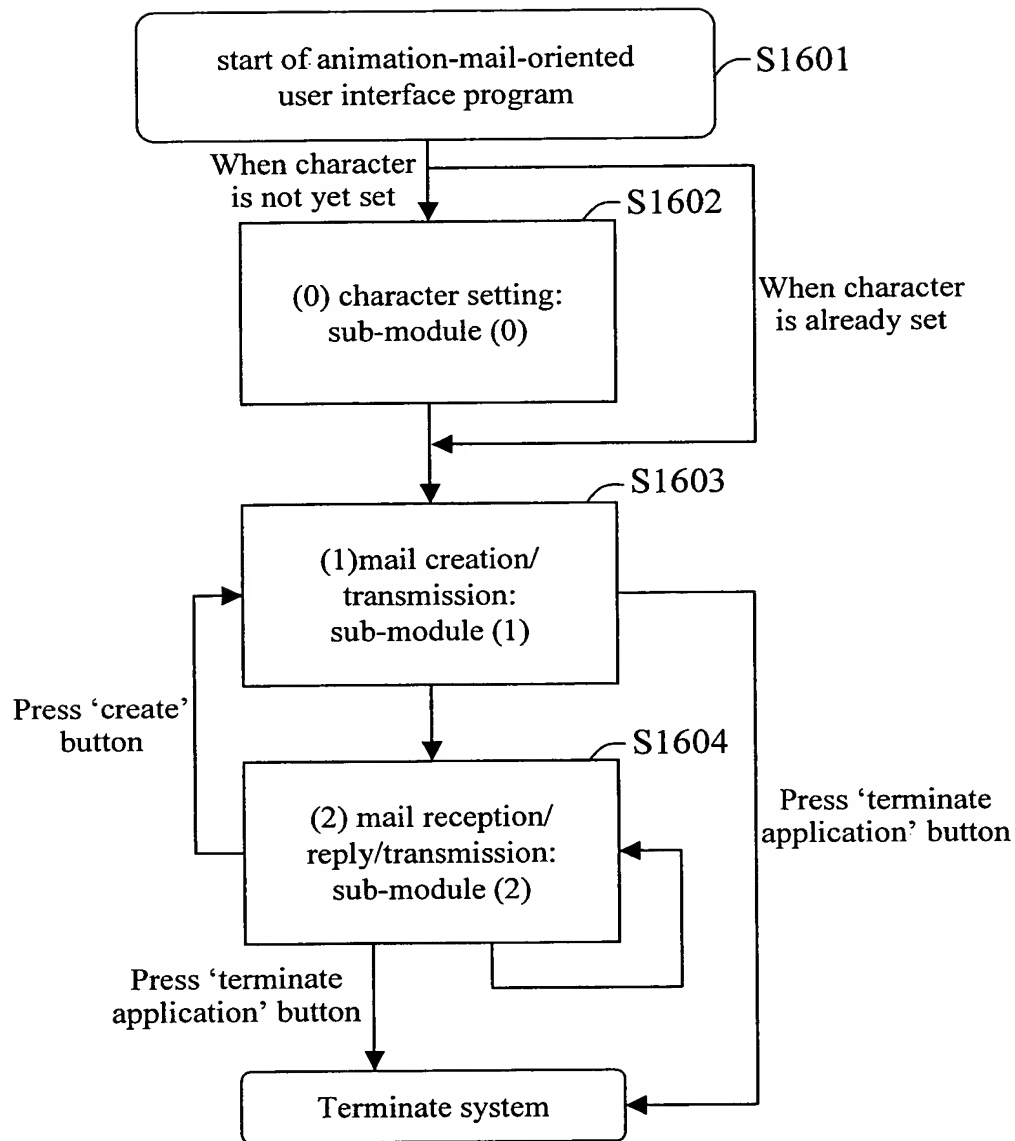


Fig.17

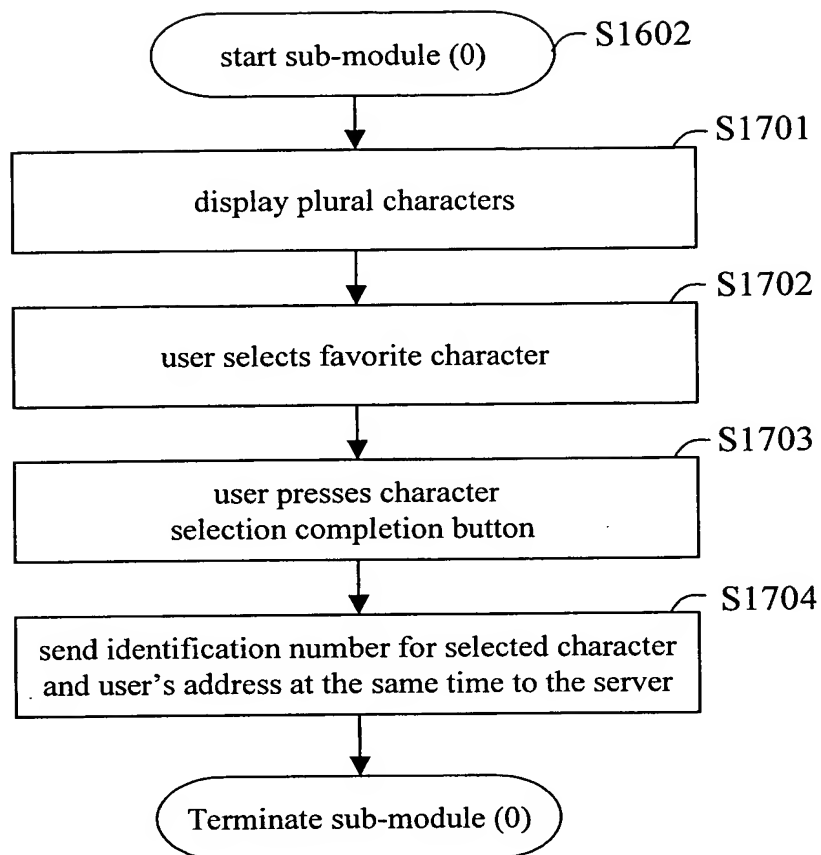


Fig.18

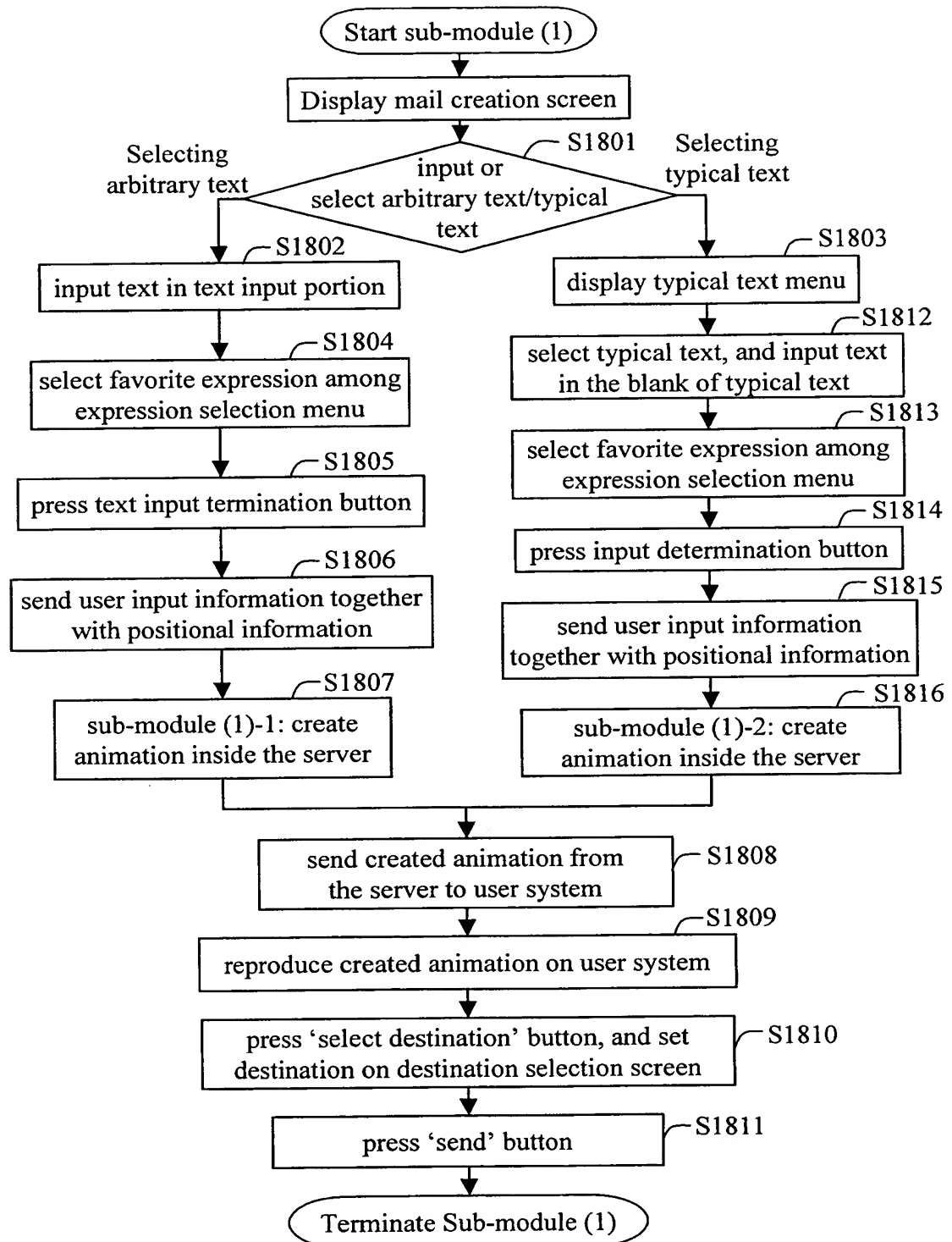


Fig.19

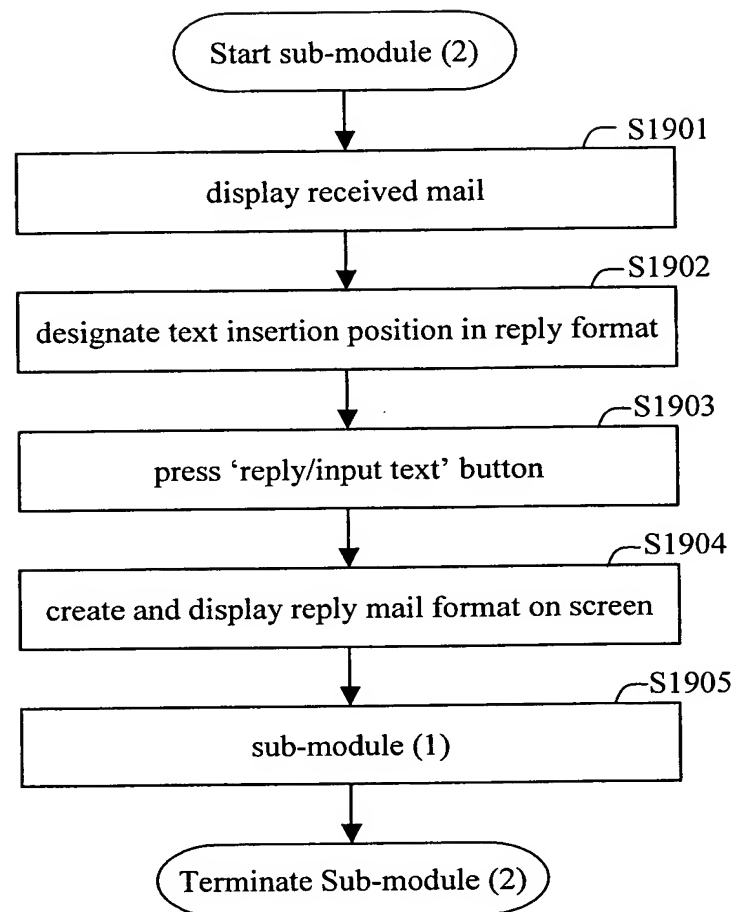


Fig.20

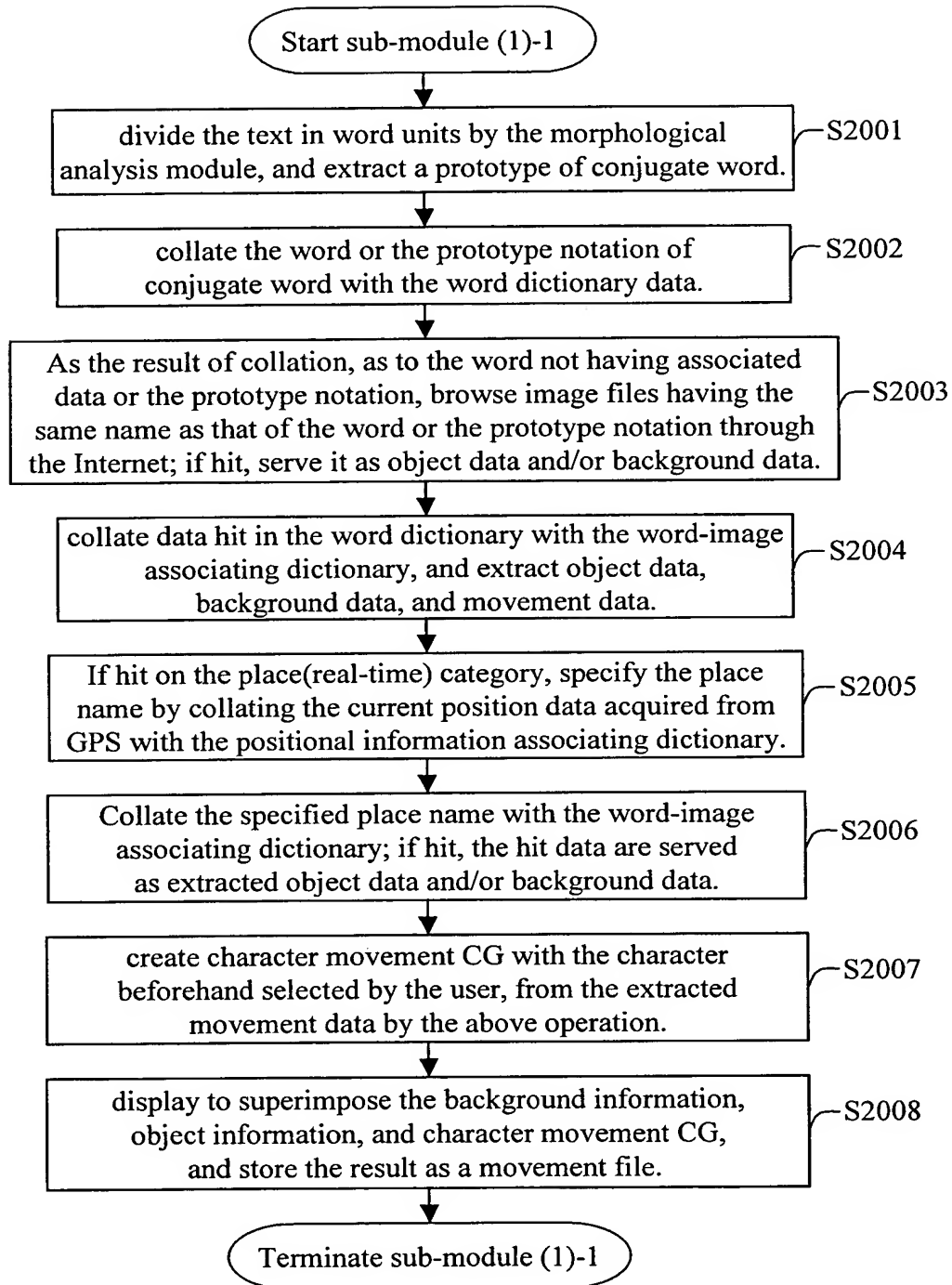


Fig.21

